PROJECT NUMBER: 1503
PROJECT TITLE: Modified Smoking Materials
PROJECT LEADER: W. A. Nichols
PERIOD COVERED: October, 1988

I. LOW DENSITY ROD - BINDER APPLICATION

A. **Objective**: Produce precoated filler via the batch process to support the current product and process development efforts on the low density rod program. Develop a method of pre-applying binders to the tobacco in a manner that can be scaled up to commercial scale.

B. **Results**: Experimentation conducted with pectin solutions from 2% to 8% (6% add-on) has demonstrated that cylinder buildup is primarily a function of solution flow rate and is insensitive to viscosity.

Results from studies comparing the batch and continuous coating processes indicate no difference in subjectives or physical properties. Additional testing will be performed to further verify this conclusion.

Process runs on the coating reel indicate that output can be increased from 60 lb/hr to 80 lb/hr without problems in coating.

C. **Plans**: Tracer investigations will be completed and standardized testing established. Tests will be performed to determine the optimum coated filler OV for cigarette fabrication.

II. ADDITIVE APPLICATION PROCESS

A. **Objective**: Utilize foam bound rod fluid application technology and other technologies for the application of cigarette additives.

B. **Results**: Sample cigarettes were produced to Marlboro Lights specification with 3.7, 3.9, 4.1, and 4.3 mg menthol/cigt. with the Kaymich applicator. Aging studies and subjective testing will be conducted on the samples.

Several issues pertaining to implementation of the Kaymich system into Manufacturing were discussed with Operations personnel. Menthol losses in the Oscar, handling of rejects, contamination, etc., will be examined in future testing.

C. **Plans**: Samples will be produced with higher GMC loading to determine if spots can be decreased. Flowmeters in the Kaymich Applicator will be tested for viscosity sensitivity. Product testing of menthol samples will be completed.

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